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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,500	03/16/2004	Kaichang Li	245-67929-01	3653

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KLARQUIST SPARKMAN, LLP
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EXAMINER

NUTTER, NATHAN M

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 09/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/802,500

Applicant(s)

LI ET AL.

Examiner

Nathan M. Nutter

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 13-18, 31 and 32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 19-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 07-05, 08-05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This application has been re-assigned to Examiner Nathan M. Nutter in Art Unit 1711. All inquiries regarding this application should be directed to Examiner Nutter at telephone number 571-272-1076.

Election/Restrictions

Applicant's election without traverse of Group I, claims 1-12 and 19-30, in the reply filed on 13 December 2004 is acknowledged.

Information Disclosure Statement

The information disclosure statement filed 13 July 2005 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

Response

In response to the Response filed 13 July 2005, the following is placed in effect:

The rejection of claims 4 and 7 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, is hereby expressly withdrawn.

The rejection of claims 1-12 and 19-30 under 35 U.S.C. 103(a) as being unpatentable over Li (US 2004/0089418) in view of Lloyd et al (US 6368529) and Sugino et al (US 6277481) or Bloch et al (US 6124032), is hereby expressly withdrawn.

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The rejection of claim 27 under 35 U.S.C. 103(a) as being unpatentable over Li (US 2004/0089418) in view of Lloyd et al (US 6368529) and Sugino et al (US 6277481) or Bloch et al (US 6124032) as applied to claim 1, and further in view of Schroeder (US 5026808), is hereby expressly withdrawn.

It is pointed out to Applicant that the reference Li (US 2004/0089418) with an effective filing date of 13 May 2002, regardless of obligation of assignment, would be considered as prior art. Counsel's depiction of filing/publication dates is erroneous. The rejections thereto are not being withdrawn in view of Applicant's arguments, but rather that closer prior art has been determined as available.

The following new grounds of rejection are being made.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 4 and 6 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Sarjeant (US 3,285,801), newly cited.

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The patent to Sarjeant (US 3,285,801) teaches the manufacture of a binder composition that may include "at least one lignin component; at least one amine compound; and at least one boron compound (claim 1)," using an industrial lignin (claim 3), in a "substantially formaldehyde-free" composition (claim 4) and using a polyamine (claim 6), as recited and claimed herein. Note column 5 (lines 21-64) for the inclusion of industrial lignin to which may be added borates (line 51) and hexamethylene tetramine (a polyamine) at (lines 53 et seq.). The resin is taught to be formaldehyde-free at column 4 (lines 62-75), as recited in claim 4.

Claims 1, 3, 5 and 6 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Lehtinen et al (US 6,030,562), newly cited.

The patent to Lehtinen et al (US 6,030,562) teaches the manufacture of a composite that may include "at least one lignin component; at least one amine compound; and at least one boron compound (claim 1)," using an industrial lignin (claim 3), with inclusion of a zinc borate of "(a)bout 0.1% to about 3.0% (claim 5) and using a polyamine, melamine, (claim 6), as recited and claimed herein. Note column 2 (lines 19-37) for the inclusion of industrial lignin to which may be added zinc borate at column 2 (lines 42 et seq) and melamine (a polyamine) at column 3 (lines 14-29).

Claims 1, 5 and 6 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Lloyd et al (US 6,368,529), cited previously by Examiner Rajguru.

The patent to Lloyd et al (US 6,368,529) teaches the manufacture of a composite that may include "at least one lignin component; at least one amine compound; and at least one boron compound (claim 1)," with inclusion of a borate compound that may be

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present as calcium borate in a "range of about 0.1% to about 4% by weight (claim 5)" and using a polyamine, melamine, (claim 6), as recited and claimed herein. Note column 3 (lines 7-30) for the inclusion of melamine resin and lignin to which may be added calcium borate at column 3 (lines 53-63).

Claim Rejections - 35 USC § 103

Claims 1-12 and 19-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sarjeant (US 3,285,801) as applied to claims 1, 3, 4 and 6 above, and further in view of Brode, III et al (US 6,716,421) or Blout (US 4,382,136), both newly cited.

The patent to Sarjeant (US 3,285,801) teaches the manufacture of a binder composition that may include "at least one lignin component; at least one amine compound; and at least one boron compound (claim 1)," using an industrial lignin (claim 3), in a "substantially formaldehyde-free" composition (claim 4) and using a polyamine (claim 6), as recited and claimed herein. The reference does not teach the use of a decayed lignocellulosic or demethylated lignin as recited in claims 2, 7-12 and 19-28.

The reference to Brode, III et al (US 6,716,421) teaches the use of lignin, or degraded or decayed lignin, in a composition that comprises a boron-containing compound and an amine compound, as herein claimed. Note column 3 (lines 60 et seq.) for the employment of boron compounds, specifically column 15 (lines 1-11 and 29-31), which, at the paragraph bridging column 15 to column 16, is included in amounts as recited and claimed herein. The reference shows the amine compounds at

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column 16 (lines 29-36 and 62-64). The lignin components are shown at column 16 (lines 8-26).

The patent to Blount (US 4,382,136) shows the use of broken down lignin, that may comprise decomposed plant material at column 2 (lines 5-13). Further, note column 1 (line 49) to column 2 (line 4). The patent teaches the inclusion of borates at column 7 (lines 42-49) and polyamines at the paragraph bridging column 7 to column 8.

The primary reference to Searjeant teaches essentially what is recited for the broad claims except that the employment of decayed or degraded lignins are not taught. The secondary references to Brode, III et al and Blount show these features to be conventional equivalents in compositions containing lignins. As such, employment of those lignins in the composition as disclosed by Searjeant would have been and obvious modification to a practitioner having an ordinary skill in the art. No unexpected results are shown on the record with regard to the choice of lignin materials since, even in a charred or degraded state lignin would maintain most of its chemical identity, as effective to produce the compositions as recited and claimed herein.

Due to the new grounds of rejection, this action is not being made FINAL.

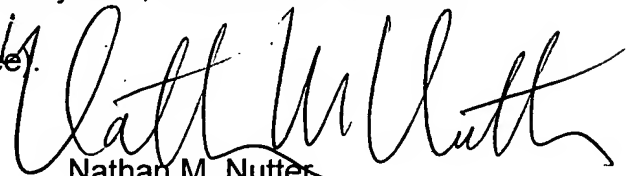
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan M. Nutter whose telephone number is 571-272-1076. The examiner can normally be reached on 9:30 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on 571-272-1078. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Nathan M. Nutter
Primary Examiner
Art Unit 1711

nmn

12 September 2005